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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/091,396

03/04/2002

Steven M. Chinitz

DP-305987

1502

7590

02/17/2004

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EXAMINER

DAVIS, OCTAVIA L

ART UNIT

PAPER NUMBER

2855

DATE MAILED: 02/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/091,396	Applicant(s) CHINITZ ET AL.	
	Examiner Octavia Davis	Art Unit 2855	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11/3/03.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. 1.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 11/3/03                      6) ☐ Other:

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 5 and 8 – 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Karpinski.

Regarding claim 1, Karpinski discloses a sensor for monitoring angular velocity comprising a bearing assembly A including a non-rotatable section 12, a rotatable section 2, an inboard bearing seal 58, and an outboard bearing seal 58 and a force sensor *S* disposed between the seals, the sensor *S* having an output used for determining a component of a force applied to the rotatable section (See Cols. 2 and 3, lines 40 – 51 and 1 – 25).

Regarding claim 2, the sensor *S* forms part of an anti-lock braking system and the signal it produces is analyzed by a controller which controls a braking force applied to the wheel (See Col. 2, lines 36 – 39).

Regarding claims 5 and 8 - 11, the rotatable section 2 constitutes a first race 22, and the non-rotatable section 12 constitutes a second race 24, the races defining a raceway 26, 44, the bearing including rolling elements 40 disposed in the raceway and the sensor *S* senses a passage of the rolling elements around the raceway (See Fig. 1, See Col. 3, lines 1 – 20, Col. 4, lines 15 – 26 and 54 – 67 and Col. 5, lines 45 – 48).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3, 4, 7 and 16 – 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karpinski in view of Joki et al.

Regarding claims 3 and 4, Karpinski lacks the output being used for determining three mutually orthogonal components of force. However, Joki et al disclose a system for monitoring the operating conditions of a bearing comprising a strain sensor 38 that determines lateral, radial, axial and thrust loads (See Cols. 3 and 4, lines 12 – 60 and 1 – 52).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Karpinski according to the teachings of Joki et al for the purpose of, Detecting expansions and contractions in the circumferential directions (See Joki et al, Col. 3, lines 18 - 28).

Regarding claims 7 and 16 – 19, Karpinski lacks a teaching that the sensor measures temperature. However, in Joki et al, the resistor-type strain sensors 38 have a variable temperature resistance, the grooves of the sensor also including a temperature sensor (See Col. 2 – 4, lines 63 – 67, 11 – 17 and 53 – 63).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Karpinski according to the teachings of Joki et al for the purpose of,

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counteracting the changes in resistance produced by the temperature variations in the sensor (See Joki et al, Col. 4, lines 58 – 63).

***Allowable Subject Matter***

5. Claims 6, 12 – 15, 20 and 21 are allowed.

***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Smith et al (6,457,869) teach a wheel mounting axle-mounted sensor.

***Response to Arguments***

7. Applicant's arguments with respect to these claims have been considered but are moot in view of the new grounds of rejection.

8. Any inquiry concerning this communication should be directed to Examiner Octavia Davis at telephone number (703) 306 - 5896. The examiner can normally be reached on Monday - Thursdays (9:00 - 5:00), Fridays off.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz, can be reached on (703) 305 - 4816. The fax phone number for the organization where this application or proceeding is assigned is (703) 746 - 4409.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 - 0956.

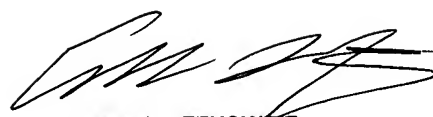
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January 26, 2004

  
**EDWARD LEFKOWITZ**  
**SUPERVISORY PATENT EXAMINER**  
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